
Patent Claims

1. WDM optical communication system, comprising input means and output means for an optical signal, an optical fibre path connecting signal-transmissively said input and output means, wherein the optic signal is amplified by means of Raman amplification and said optical fibre path comprises at least one Raman amplifier, further comprising WDM means for coupling at least two polarized pump radiation wavelengths with wavelengths less than the signal radiation wavelength into said Raman amplifier,

characterized in

that one pump radiation wavelength has a selected different polarization with respect to the polarization of the other pump radiation wavelengths.

2. Amplifier according to claim 1, characterized in that the Raman amplification is a distributed Raman amplification.

3. Amplifier according to claim 1, characterized in that the Raman amplification is a localised Raman amplification

4. Amplifier according to one of the preceding claims, characterized in that at least one pump radiation wavelength has a polarization which is orthogonal with respect to the polarization of at least one other pump radiation wavelength.

5. Amplifier according to claim 3, characterized in that the polarization of the pump radiations of the lower part of the pump wavelength band is orthogonal with respect to that of the upper part